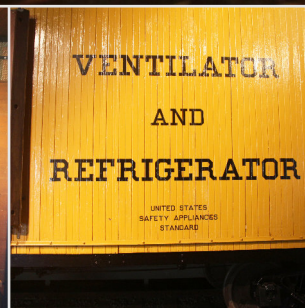


FGEX #35832

REFRIGERATOR CAR

Preliminary Report Research and Restoration Report Addendum



Fruit Growers Express Refrigerator Car No. 35832
Preliminary Report

By
Neal Abernathy
Historical Researcher

California State Railroad Museum
Department of Parks and Recreation
March 29, 1979

Brief History

Fruit Growers Express Company Refrigerator Car No. 35832 was built in FGE's Indiana Harbor Shops in 1924. It was designated as a type RS car which is the AAR abbreviation for a refrigerator car using ice or ice and salt in combination to coat the load space. It operated for 38 years in general railroad service until 1962 when it was retired from service.

The car was then sold to Rainier Ice and Cold Storage Company of Seattle, Washington. It was subsequently bought by the Pacific Coast Chapter of the Railway and Locomotive Historical Society for \$1,500 and arrived at Bethlehem Steel in San Francisco on 20 November 1973, where it was reconditioned at a cost of \$14,367.51. It was then donated to the State of California for display in the California State Railroad Museum.

Restoration Options

The question of determining the proper interpretive period for FGE No. 35832 is a relatively simple one. Throughout the car's service history, the Fruit Growers Express Company maintained only one basic paint scheme which consists of yellow sides with black lettering, brown roof and ends with white lettering, and black side sills, underframe, and hardware. At some later time in the car's history, an unpainted galvanized steel roof was added. The only two in-service configurations possible for the car, then, are before or after the addition of the metal roof.

Drawings of a similar series of FGE car can be found on page 174 of the 1931 Car Builder's Cyclopedia and page 178 of the 1937 Car Builder's Cyclopedia.

Work Needed

In order to restore FGE No. 35832 to its original 1924 appearance, it will be necessary to perform the following:

The plywood car ends and flooring removed and replaced with tongue-and-groove siding and flooring.

The ice bunkers, ice racks, and cargo floor racks be reconstructed.

The galvanized steel roof removed and replaced with tongue-and-groove hatches.

The "B" end truck appears not to be original but is of the same type as the "A" end truck which does appear to be original.

Further paint research must be done to establish the proper lettering configuration and color matches.

The plywood interior faces of the side doors replaced with tongue-and-groove, and they should be further examined to insure their accuracy.

FRUIT GROWERS EXPRESS
REFRIGERATOR CAR NO. 35832

RESEARCH AND RESTORATION REPORT

by

KYLE K. WYATT

and

The Restoration Research Staff

California State Railroad Museum
Department of Parks and Recreation

December 1979

Preface

This report is one of a series by the Restoration Research staff on equipment being restored by the California State Railroad Museum. It gives a summary of the car's history and recounts what was involved in the car's restoration. For further information, the reader is advised to consult the collected material on the car in the archives of the Museum.

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Introduction.

The California State Railroad Museum, a project of the California Department of Parks and Recreation, is being developed to interpret the important part that railroads have played and are playing in the development and continued prosperity of California and the West. A major component of this project will be the Museum of Railroad History in Old Sacramento. This building will house a large collection of accurately restored 19th and 20th century railroad locomotives and cars, along with other interpretive displays, presenting the story of western railroading.

One display will be the 1924 vintage Fruit Growers Express Refrigerator Car No. 35832. Through displays and a mini-theater inside, the car will explain the role railroads have played in the development and expansion of agriculture in the West and the rest of the country.

The following report will outline the history of the car and the steps taken to prepare it for display.

History

The history of refrigerated transit on railroads began on July 1, 1851, when a wooden boxcar, insulated with sawdust and stocked with ice, was loaded with eight tons of butter for shipment from Ogdensburg, New York to Boston, Massachusetts. Probably the first refrigerated shipment of fruit was by Parker Earle in 1866 on the Illinois Central Railroad. He constructed large refrigerator chests for shipping strawberries by express. Between 1867 and 1870, Parker experimented with several patented designs for refrigerator cars, including the Tiffany car (see Appendix B), one of the most successful of the early designs.

By the 1890s, refrigerator car design had improved greatly. In October, 1891, a car of dressed beef travelled for seven days from Sioux City, Iowa to Boston, without reicing. The Armour Packing Company was in the forefront of improved designs. After 1890, this company took an active interest in fruit and vegetable traffic, as well as its meat business.

Until 1918, there was no uniformity in refrigerator car designs. In that year, the U.S. Department of Agriculture ran a number of tests and made a series of recommendations. These were generally adopted by all the companies involved in refrigerated transit.

The Fruit Growers Express Company of today was incorporated on March 18, 1920. The company came into being as a result of government antitrust action in which the Armour Company was required to divest itself of its subsidiary corporation, Fruit Growers Express, Inc. The New York, New Haven and Hartford

Railroad, Norfolk and Western Railway, and the Chicago and Eastern Railroad Companies took a proprietary interest in the Fruit Growers Express Company and assumed a pro rata share of the liabilities of the previous stockholders incident to taking over the Armour equipment and facilities. These consisted of 4,279 refrigerator cars, shop facilities at Potomac Yards, Virginia, icing facilities, etc.

The company broadened its scope of operation to provide perishable protective service east of the Mississippi River. They provided a centralized control of refrigerator cars in this territory to get best efficiency of equipment in moving perishable seasonal cargo. This centralization had been desired by the Interstate Commerce Commission and the large shippers of perishables. In keeping with the expanded operations, the Fruit Growers Express purchased an additional 969 refrigerator cars from the receiver of the Chicago and Eastern Illinois Railroad Company and the government agreed to loan the company 60% of the funds to buy 2,000 more cars. This purchase was not consummated due to the depression of that period. Car shop production capability was also increased to 100 per month.

Fruit Growers Express built refrigerator car No. 35832 in its Indiana Harbor Shops in 1924. The car was 41 feet long overall, with 33 feet between the ice-filled cooling compartments which were located at each end (see Appendix A). With wood sheathing and a steel underframe, it was typical of railroad car construction of the period. For the next 38 years, it operated in general service around the country.

Upon retirement in 1962, the car was sold to the Rainier Ice and Cold Storage Company of Seattle, Washington, for use as storage space. In 1973, it was purchased by the Pacific Coast Chapter of the Railway and Locomotive Historical Society for \$1,500. It was taken to the Bethlehem Steel Company facility in San Francisco, arriving on November 20, 1973, where it was given a face lift, including resheathing the ends with scribed plywood and rebuilding the ice bunkers. The cost of this work was \$14,367.51. After completion of the work, the car was donated to the State of California for display at the California State Railroad Museum.

Research

Very little documentary information about Fruit Growers Express refrigerator car number 35832 was located. Shop records were probably disposed of shortly after the car was sold in 1962. As a result, most information for the restoration had to come from photographs and drawings of similar cars.

Paint research indicated that the car was probably repainted in 1951, and was repainted three more times before it was sold by F.G.E. Photos of the car when it arrived at the Bethlehem facility in San Francisco show the last overhaul date to be in 1960. From this, it appears that the previous two repaintings were in 1957 and 1954, giving a three year spread between paintings.

The planned display in the museum required a car representative of the time between the 1920s and the 1940s. As there was no physical paint evidence on the car to support this time period, it was necessary to depend on photographs and other sources for the paint scheme. F.G.E. paint schemes did not change a great deal over the years, and a 1950 vintage lettering diagram provided much helpful information.

Several improvements added to the car over the years limited the dates that we could represent with the car. Steel-sheathed roofs were starting to be applied by 1936. AB brakes were required on cars rebuilt after 1937. These improvements on the car dictated a date around the late 1930s. A photo of a Western Fruit Express car turned out (built or rebuilt) by the Indiana Harbor shops of Fruit Growers Express in November of 1938 shows these improvements. As our car was built in those shops, this date and location was chosen.

The month in 1924 when the car was built was also unknown. May was chosen at random and applied to the end of the car (built new 5-24). The information on the end of the car is a composite developed from photographs of Fruit Growers Express cars of the period. It is believed that the car was lettered as a "Ventilator and Refrigerator" car, as opposed to just a "Refrigerator" car, but no documentation is available to support or deny this. These decisions concluded the research on the car.

Restoration

On June 19, 1979, the Fruit Growers Express Company refrigerator car No. 35832 was moved into the Unit Shop restoration facility of the California State Railroad Museum to ready it for display in the History Building of the Museum. The plywood end sheathing was removed, the interior framing was renewed, and one end was pulled back into square from the leaning parallelogram shape it had. New tongue and groove wood sheathing was then applied. That concluded the rebuilding of the exterior.

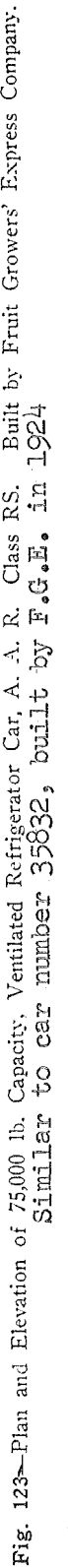
On the interior, plywood had been placed over the flooring. This was removed, and the flooring was renewed as needed. New sheet metal thresholds were installed. The bulkheads between the cargo compartment and the ice bunkers had been rebuilt in a form unlike the originals. These were taken out. A new bulkhead of the original style was built in the "A" end. An "Interpretive Hole" was cut in the center of the bulkhead to allow visitors to see into the ice bunker from the interior of the car. The bulkhead at the other end of the car was not installed in preparation for a mini-theatre to be inside the car when it is in the Museum.

The final step in the restoration was the painting of the car as it was when in service. In keeping with Museum policy, original type materials were used wherever possible in restoring the car. As completed, it is an excellent example of the car building practices of the 1920s and 1930s. With the mini-theatre, it will help explain the role played by the railroads in the agriculture of the country.

F.G.E.X. Reefer 35832

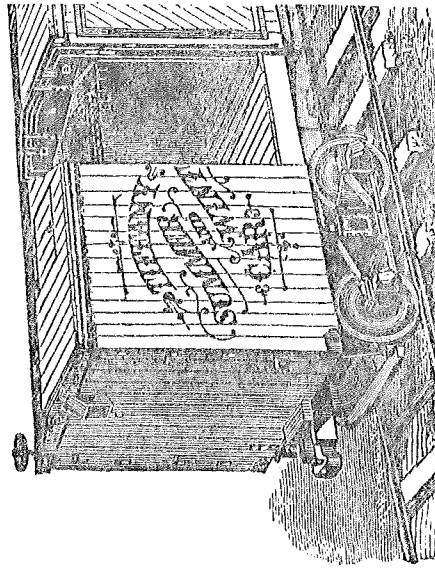
CHRONOLOGY

- 1924 Built by Fruit Growers Express at Indiana harbor Shops.
- 1930s-1940s Rebuilt with sheet metal roof and AB type brakes.
- 1951 Resided in major shopping.
- 1952-1959 Repainted twice (1954? and 1957?).
- 1960 Last shopping by Fruit Growers Express.
- 1962 Sold to Rainier Ice and Cold Storage Company of Seattle,
Washington for storage space.
- 1973-1974 Purchased by Pacific Coast Chapter, Railway and Locomotive
Historical Society. Renovated at Bethlehem Ship Yards,
San Francisco.
- 1974 Donated to State of California; shipped to Sacramento.
- 1976 Placed on display outside the reconstructed Central Pacific
Passenger Station in Old Sacramento.
- 1979-1980 Restored at the Unit Shop of the California State Railroad
Museum in preparation for display in the Museum of Railroad
History.



GREATEST ECONOMY IN THE USE OF ICE.

Adopted by Several Railroads and Fast Freight Lines,



FOR TRANSPORTATION OF

BEEF,
POULTRY,
EGGS,
BUTTER,
FRUIT,

And all kinds of Perishable Goods, Summer
and Winter.

CHARLES F. PIERCE, Manager,

74 Washington Street,

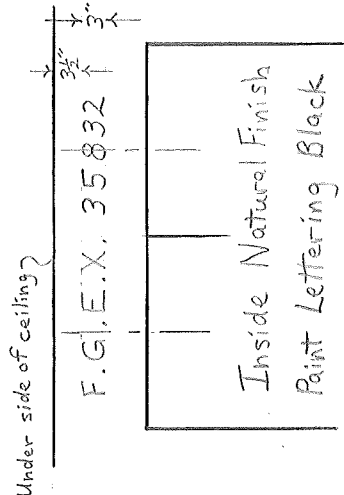
Chicago, Ill.

ABSOLUTE PROTECTION FROM EXTREME COLD.

Tiffany Refrigerator Car

from Car Builder's Dictionary, 1879

Interior of Car Above Door

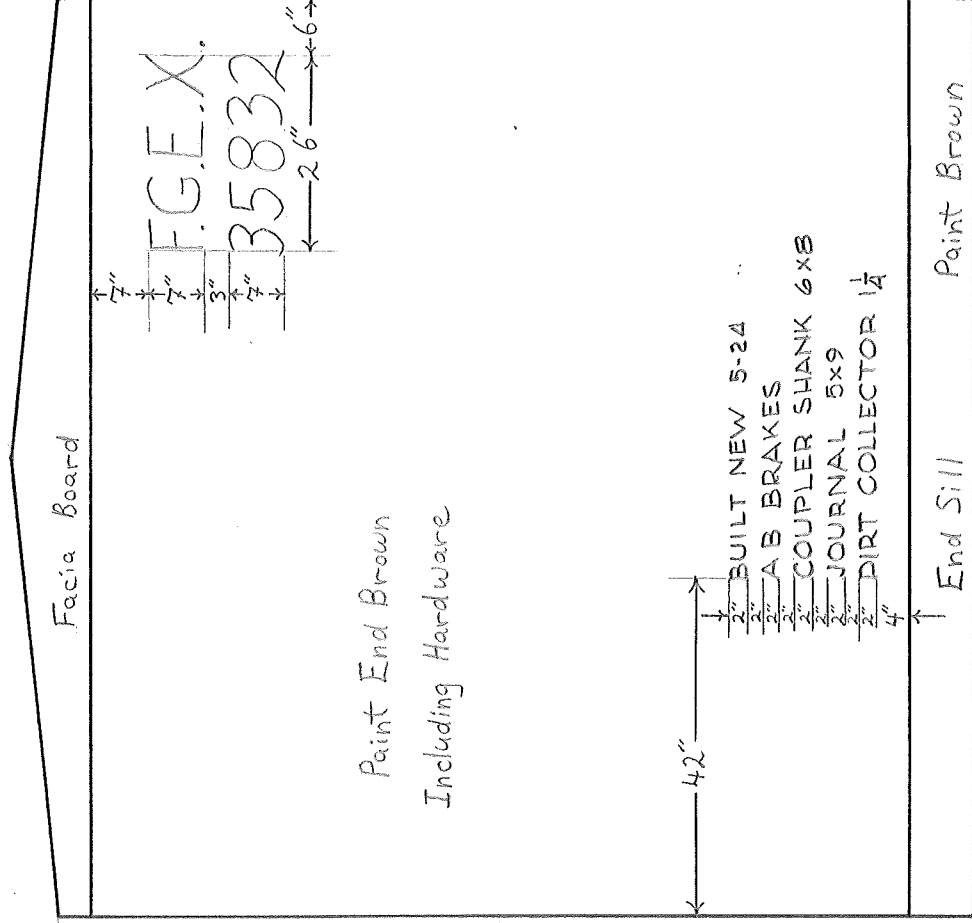


Notes

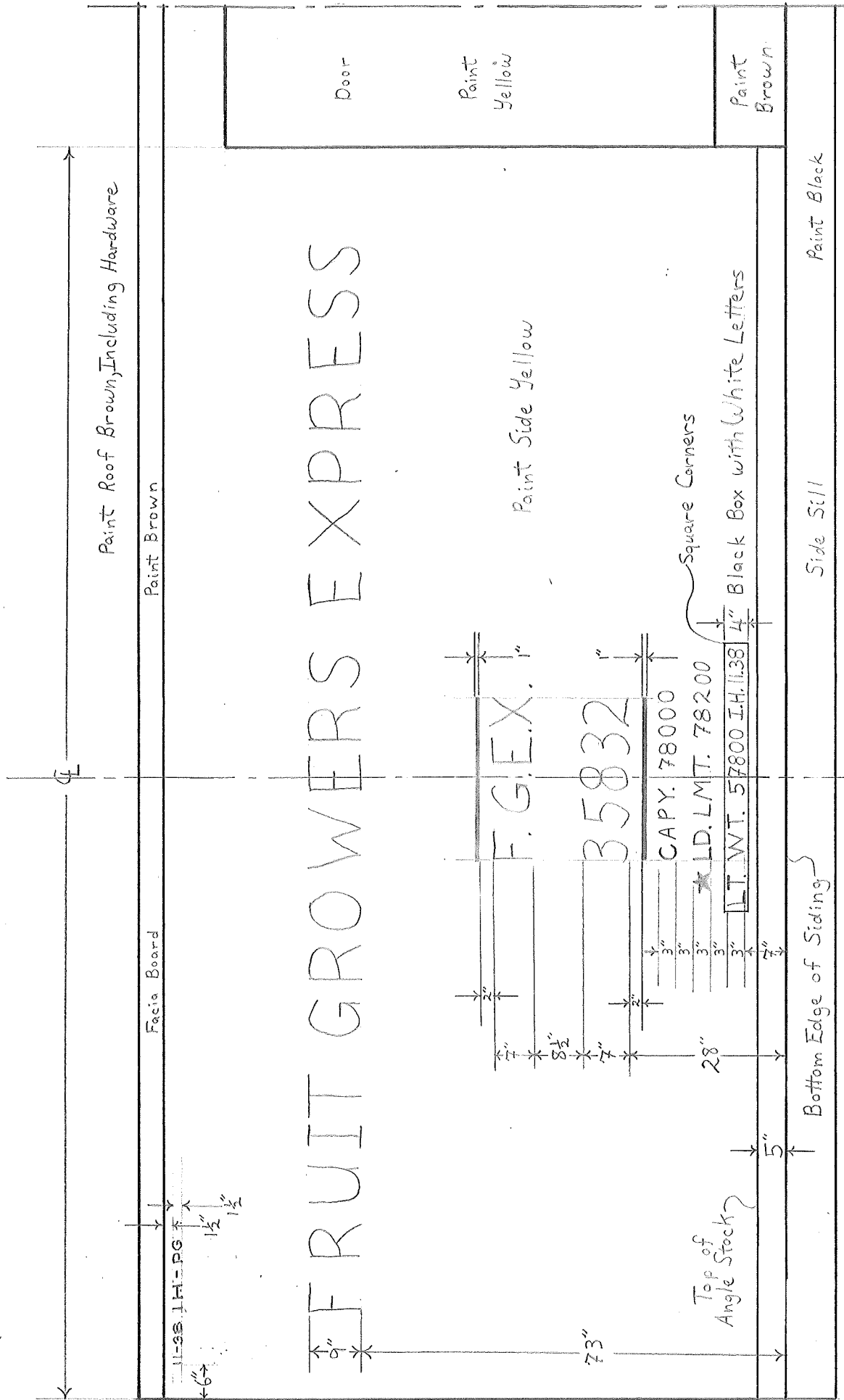
7" and 9" lettering is serif block - see photos

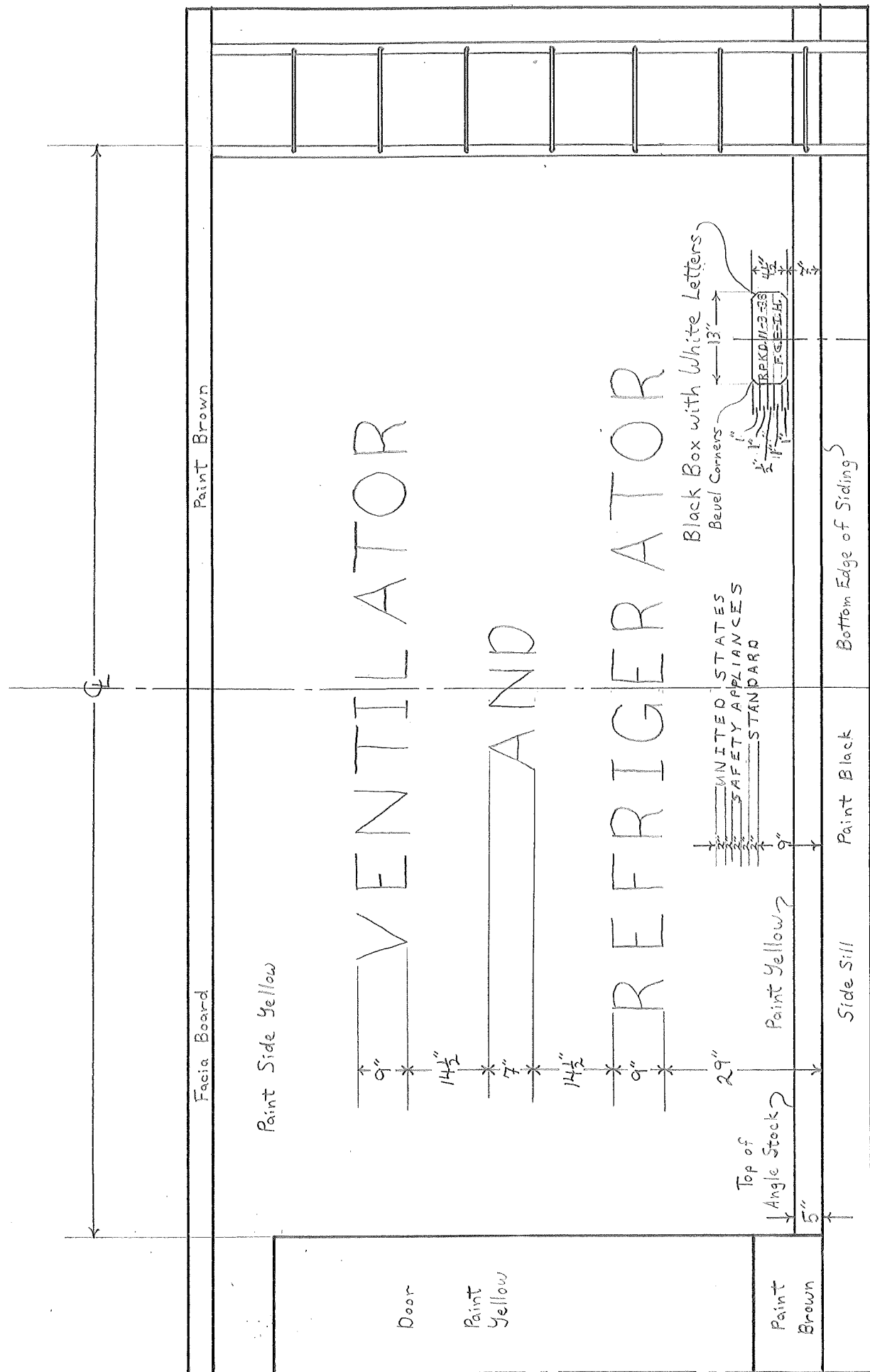
3" and smaller lettering is san-serif block - see 3" samples and photos

7" & 9" numbers not necessarily the same style as 3" & under numbers

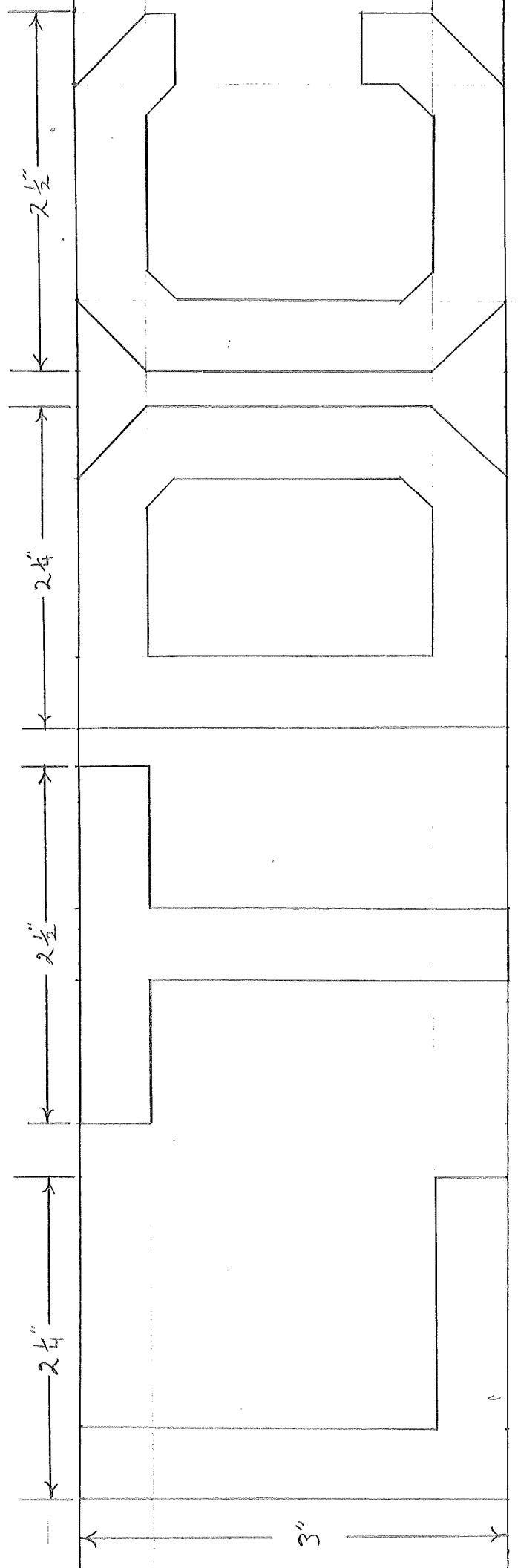
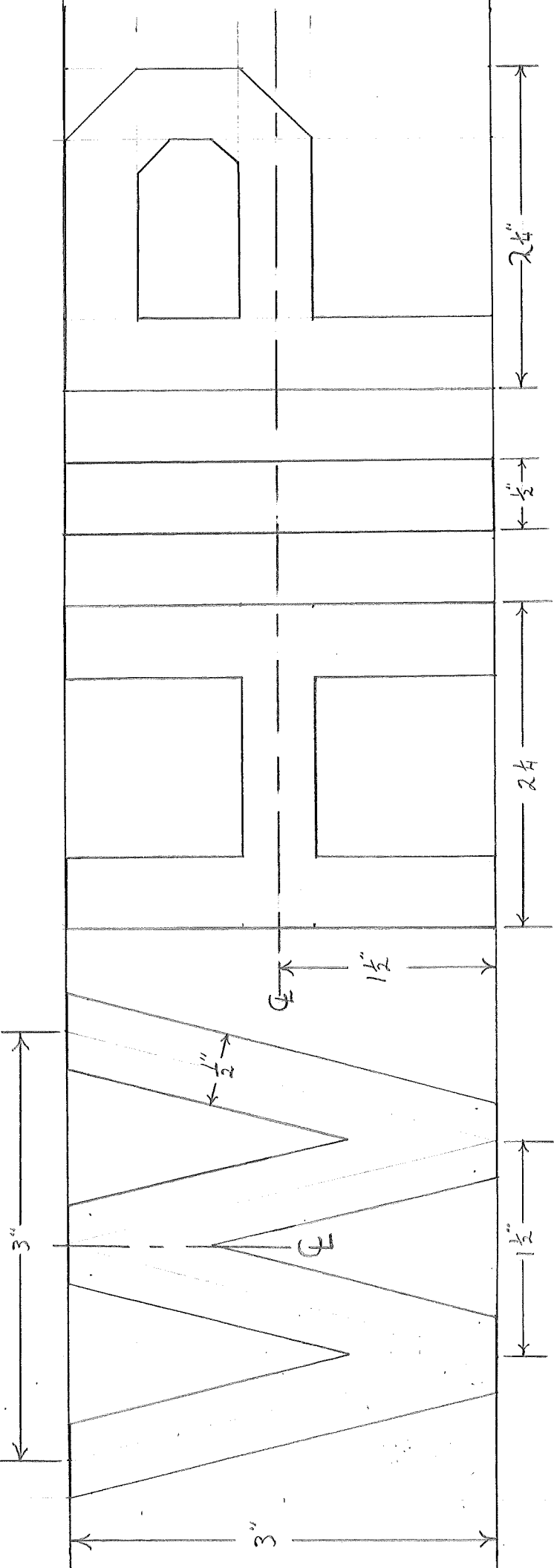


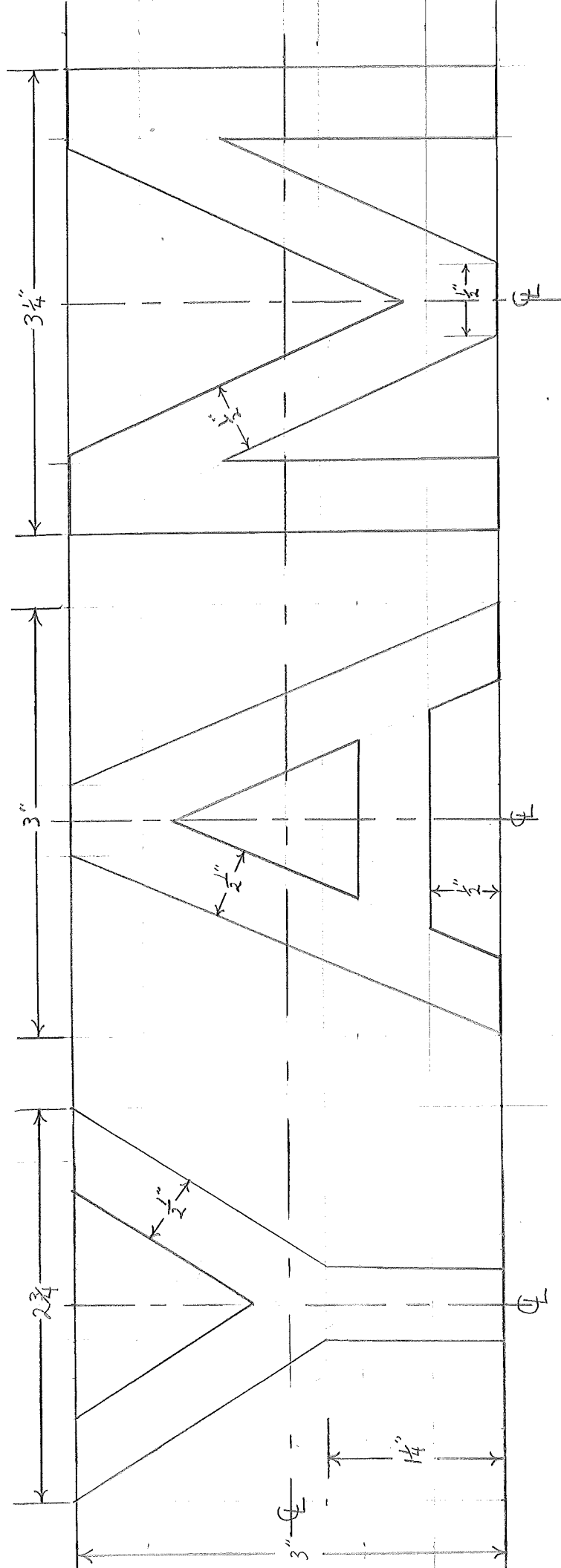
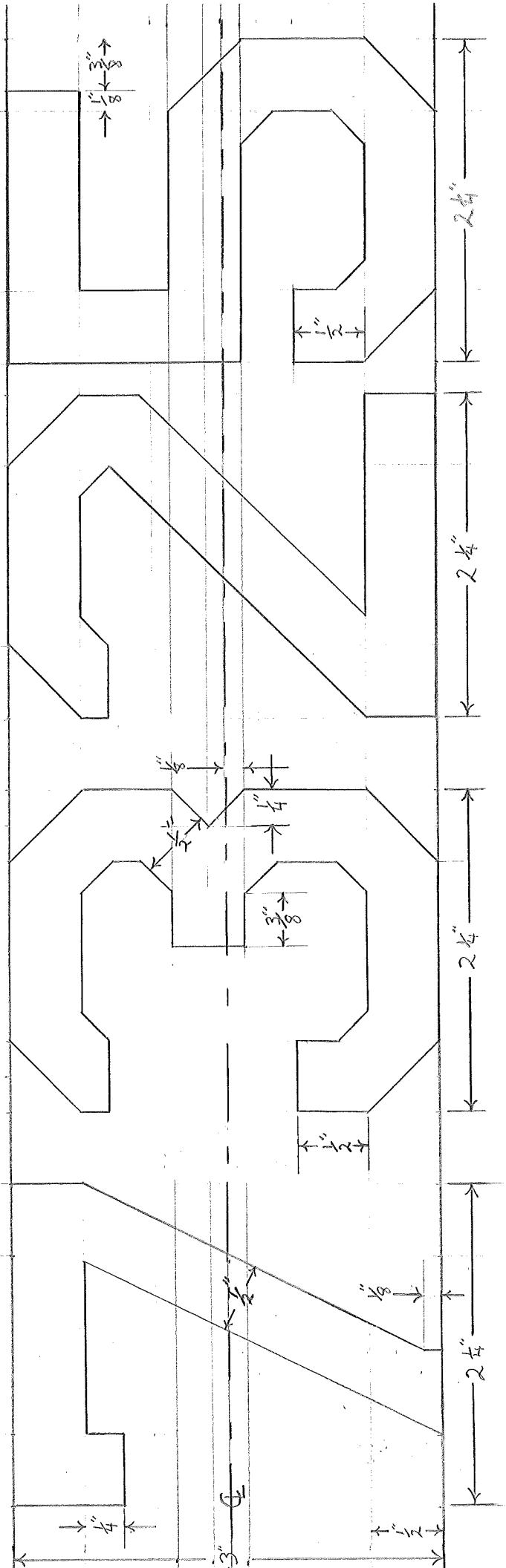
Paint Lettering White





Paint Lettering and Hardware Black, except Angle Stock and except as noted





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A-9503C

Photo #1

Icing refrigerator cars

Credit: National Geographic Society

Photo #2

Builder's photo of Fruit Growers Express refrigerator car similar to the 35832

Credit: Fruit Growers Express Company

Photo #3

Former Fruit Growers Express car 35832 as received by the Chapter for renovation at Bethlehem Ship Yards in San Francisco

Credit: Pacific Coast Chapter, Railway and Locomotive Historical Society

Photo #4

Rebuilding the end of the car at the Unit Shop

Credit: California State Railroad Museum

Photo #5

Rebuilt end of the car at the Unit Shop

Credit: California State Railroad Museum

Photo #6

Icebunker bulkhead with "Interpretive Hole" as rebuilt at the Unit Shop

Credit: California State Railroad Museum

A-0450D



Photo #1

Iceing refrigerator cars
Credit: National Geographic Society



Photo #2

Builder's photo of Fruit Growers Express refrigerator car similar to the 35832
Credit: Fruit Growers Express Company



Photo #3

Former Fruit Growers Express car 35832 as received by the Chapter for renovation at Bethlehem Ship Yards in San Francisco
Credit: Pacific Coast Chapter, Railway and Locomotive Historical Society

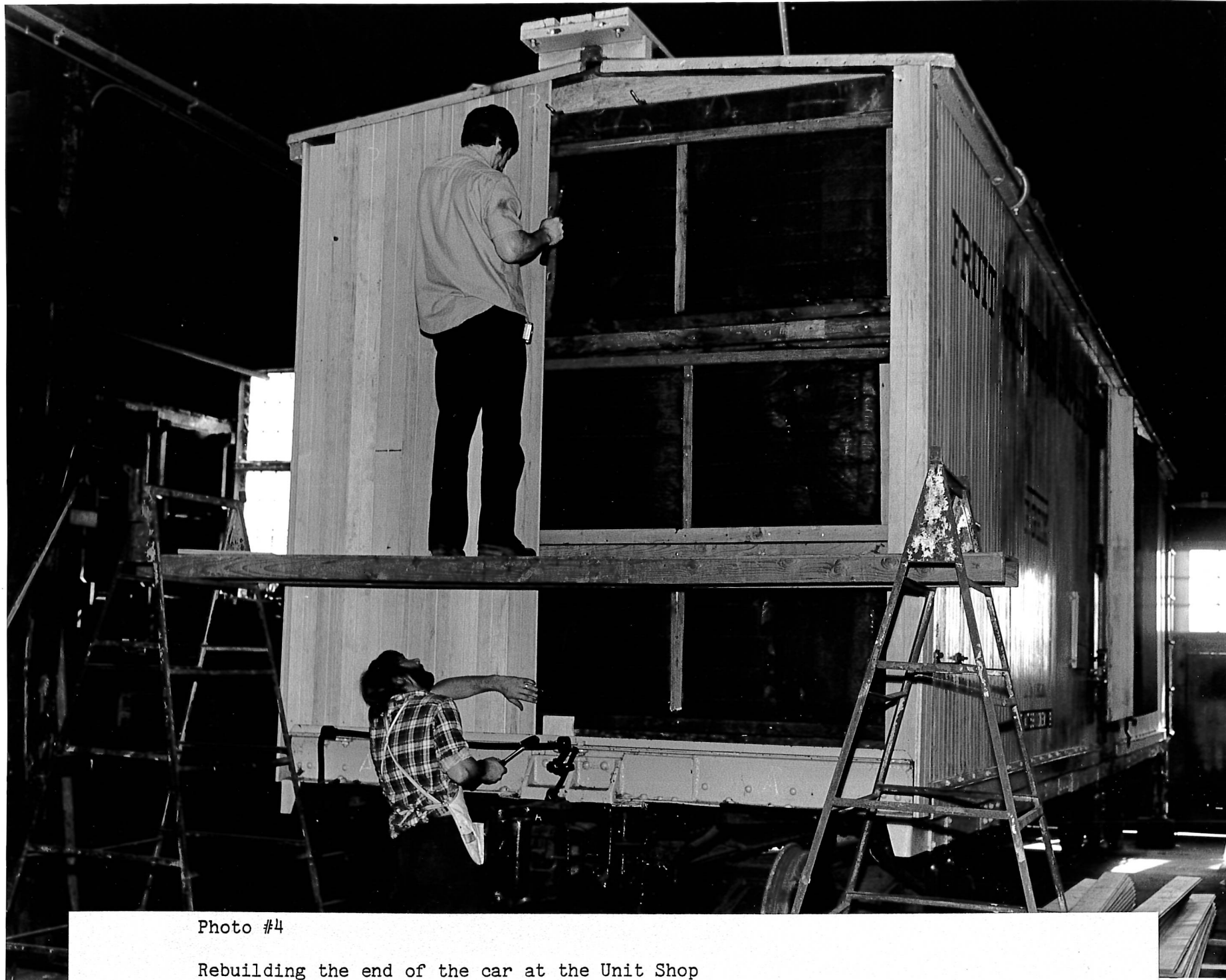


Photo #4

Rebuilding the end of the car at the Unit Shop
Credit: California State Railroad Museum



Photo #5

Rebuilt end of the car at the Unit Shop
Credit: California State Railroad Museum

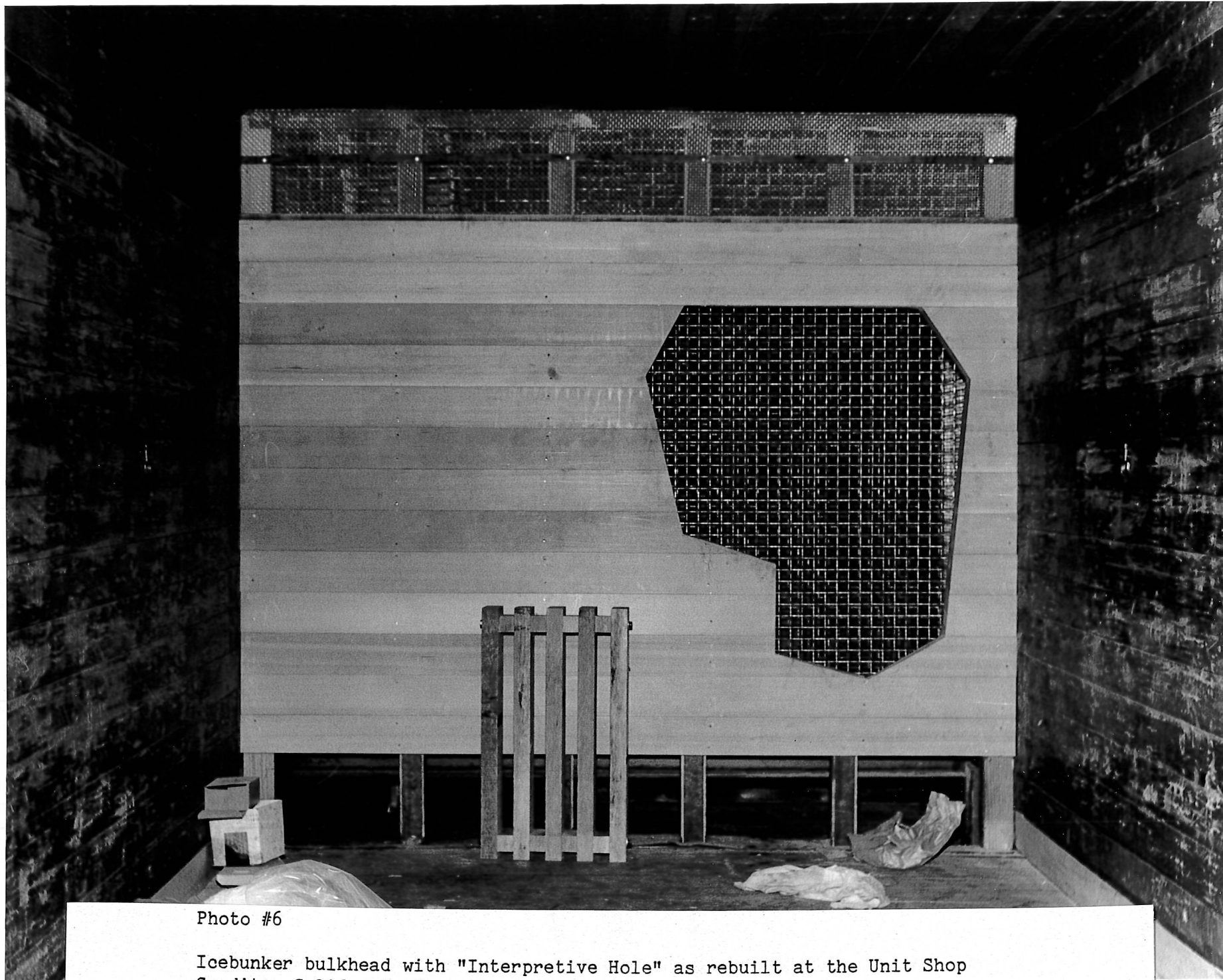


Photo #6

Icebunker bulkhead with "Interpretive Hole" as rebuilt at the Unit Shop
Credit: California State Railroad Museum

August 24, 1983

ADDENDUM

Add this sheet and information to Research and Restoration Report, "Fruit Growers Express Refrigerator Car No. 35832".

On April 22, 1980, after much telephoning, the California State Railroad Museum restoration team received one gallon of paint from the Jacksonville, Florida Fruit Growers Express Shops. We were searching for code numbers of the correct paint for No. 35832. The paint received simply carried a label saying "Yellow Paint". The FGEX shops at Stockton were unable to assist us and referred us back to Jacksonville.

We contacted a Mr. Turk at Jacksonville who advised us of the following manufactures codes for "Reefer Yellow":

Dupont _____ 657-Y-861
This mix was ordered from
E. I. Dupont
308 E. Lancaster Ave.
Winnewood, PA
and shipped from Chicago

Pittsburgh Paints _____ UC44968

~~D~~utch Boy _____ 25-441

It was also found that the paint on the car was a very close match to Dupont Color Chip #6561.

Future contacts a Jacksonville should be to: Mr. Grant Coolbaugh or
Mr. Turk
P.O. Box 37003
Jacksonville, FL 32205
(904) 354-3838


Dick Denison, Exhibit Specialist
California State Railroad Museum
(Former Head of Restoration Research)

Holders of copies of research reports should, at the end of third paragraph, page 5, add the note "See Addendum".